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10/526,416

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Matthew M Terry

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EXAMINER

JOHNSON, STEPHEN

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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

| | | | |
|------------------------------|---------------------------------------|-------------------------------------|--|
| Office Action Summary | Application No. 10/526,416 | Applicant(s) TERRY ET AL. | |
| | Examiner Stephen M. Johnson | Art Unit 3641 | |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 22 July 2007.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-38 is/are pending in the application.
- 4a) Of the above claim(s) 10, 11 and 15 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-9, 12-14 and 16-38 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☒ Claim(s) 1-38 are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>6/2007; 9/2007</u> . | 6) <input type="checkbox"/> Other: _____ |

1. Applicant's election without traverse of species D, illustrated in fig. 4, in the reply filed on 5/1/2006 is acknowledged.

Claims 1-9, 12-14, and 16-38 read on the elected invention/species and an action on these claims follows.

Claims 10-11 and 15 are withdrawn from consideration as being directed to non-elected embodiments or species. The elected species D (illustrated in fig. 4) lacks a truss unit having leg members (see claim 10) and a core that is an open cell foam (see claim 15).

With regard to the argument that the truss unit 26 of fig. 4 has leg members, this is not convincing. Nothing in figure 4 has been described as a leg member nor are leg members necessarily inherent to truss unit 26 as disclosed by applicant.

The requirement is still deemed proper and is therefore made FINAL.

2. The amendment filed 10/13/2006 is objected to under 35 U.S.C. 132(a) because it introduces new matter into the disclosure. 35 U.S.C. 132(a) states that no amendment shall introduce new matter into the disclosure of the invention. The added material which is not supported by the original disclosure is as follows: In the insertion on page 6, lines 18-14, addition of the phrase "or any combination thereof" is unsupported by the application as originally filed.

Applicant is required to cancel the new matter in the reply to this Office Action.

3. Applicant's arguments are addressed as follows. It is argued that reference to the phrase "combinations and sub-combinations as discussed through out this document" provides support for this language. In response, this is not the same as "any combination thereof". With regard to

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the issue that addition of the phrase “one or a plurality of the listed materials/layers” somehow makes the addition of this added language appropriate, this is not understood and not convincing.

4. Claims 1, 8/1, 18/1, 19/1, 20/1, and 26 are rejected under 35 U.S.C. 102(b) as being anticipated by Brown et al. (640).

Brown et al. disclose a protection structure and associated method for making comprising:

- a) an open cell core structure; 16, 20
- b) a top face sheet; 22
- c) a bottom face sheet; 18 (adjacent 22b)
- d) a projectile arresting layer coupled to the top face sheet; 12
- e) fragment catching layer coupled to a bottom face sheet; 18 (multiple layers)
- and
- f) at least one truss unit. support walls of 20

With regard to the method claims, the steps of “providing”, “coupling”, and “disposing”, these steps are inherently met since the structure directed to the top and bottom face sheets are illustrated as being coupled (see lone fig.); the open cell core structure is clearly provided (see line fig. (20)); and the projectile arresting layer and fragment catching layer are clearly disposed coupled to the appropriate face sheets (see lone fig. (12, 22; 18)).

5. Applicant’s arguments are addressed as follows. It is argued that ballistic layer is being relied upon to teach both the bottom face sheet and the fragment catching layer. In response, note that layer 18 is composed of multiple layers (see col. 2, lines 12-14) one of which would be the bottom face sheet and the other of which would be the fragment catching layer.

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6. Claims 1-9, 12-14, 16, 18-21, and 23-38 are rejected under 35 U.S.C. 102(b) as being anticipated by Groves (661).

Groves discloses a protection structure and associated method for making comprising:

- a) an open cell core structure; 34, 35
- b) a top face sheet; 32
- c) a bottom face sheet; 33 (nearest 35)
- d) a projectile arresting layer coupled to the top face sheet; 31
- e) fragment catching layer coupled to a bottom face sheet; 33 (multiple layers)
- f) a projectile arresting structure disposed inside the core 46
structure;
- g) a fragment catching structure disposed inside the core 37, 38
structure;
- h) at least one truss unit; support walls of 34, 35
- i) at least one textile layer of intersecting support members 37
forming apertures;

With regard to the method claims, the steps of “providing”, “coupling”, and “disposing”, are inherently met. The structure directed to the top and bottom face sheets are illustrated as being coupled (see fig. 1); the open cell core structure is clearly provided (see fig. 1 (34, 35)); and the projectile arresting structure and fragment catching structure are clearly disposed inside the core (see fig. 1 (46, 37, 38)); the projectile arresting layer is clearly disposed as being

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coupled to the top face sheet (see fig. 1 (31, 32 and col. 7, lines 4-9)); and the fragment catching layer is clearly disposed as being coupled to the bottom face sheet (see fig. 1 (33)).

7. Applicant's arguments are addressed as follows. It is argued that Kevlar layers 31 do not qualify as a projectile arresting layer because any incoming projectile is already arrested by outer layer 11. In response, outer layer 11 while useful would not stop all incoming layers. If it did what would be the point of having a second layer 12. Consequently, the second layer 12 which includes Kevlar layers 31 would act as a projectile arresting layer to any incoming projectile that makes it through outer layer 11.

It is argued that multiple layer 33 is being relied upon to teach both the bottom face sheet and the fragment catching layer. In response, note that layer 33 is composed of multiple Kevlar layers (see fig. 1) one of which would be the bottom face sheet and the other of which would be the fragment catching layer. With regard to the issue of the layers functioning as "a face sheet" and "a fragment catching layer". Since one layer of 33 is against the face of the open core and the other layer is composed of Kevlar, these layers clearly function as claimed.

It is argued that layers 34 and 35 do not qualify as "open cell core structure" because each of these layers has an intermediate layer 36 so attached as to close the chambers. In response, intermediate layer 36 is not being relied upon to meet this claim limitation. Open dome shaped cells 34 and 35 are. Just because a layer is attached to the open cell core does not remove it from being an open cell core prior. If it was not an open cell core, it would not be possible to fill this core with particles 46. Further, note that there is no layer 36 under open cell core structure 35.

8. Claims 17 and 22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Groves (661) in view of Tippet (023).

Groves (661) applies as recited above. However, undisclosed is a fabric layer that of a ceramic fabric material. Tippet (023) teaches a fabric layer that is a ceramic fabric (see para. [0040]). Applicant is substituting one type of fabric layer for another as explicitly encouraged by the secondary reference (see para. [0040] of Tippet) with expected or predictable results. It would have been obvious to a person of ordinary skill in this art the time of the invention to apply the teachings of Tippet to the Grove protection structure and have a protection structure with a different type of protective fabric layer.

9. Applicant's arguments are addressed as follows. It is argued that Tippet is directed to a composite expansion joint material. While this is accurate. Tippet also provides explicit motivation for substituting different types of fabric barriers (see para. [0040]). Further, since one of these materials is Kevlar which is used predominantly in armor material applications, appropriate motivation has been provided for combining these two references.

With regard to the argument that Tippet does not overcome the deficiencies in Grove, since no deficiency is present in Grove, this argument is also unconvincing.

10. Applicant's arguments filed on 7/22/2007 have been fully considered but they are not persuasive. These arguments have been addressed in the preceding paragraphs.

11. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO

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MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

12. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Stephen M. Johnson whose telephone number is 571-272-6877 and whose e-mail address is (Stephen.Johnson@uspto.gov). The examiner can normally be reached on Tuesday through Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Michael Carone can be reached on 571-272-6873. The Central FAX phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 800-786-9199.

/Stephen M. Johnson/
Primary Examiner, Art Unit 3641

Stephen M. Johnson
Primary Examiner
Art Unit 3641

SMJ
September 28, 2007